AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A process for producing an organic semiconductor material having rodlike low-molecular liquid crystallinity, comprising: a skeleton structure comprising L 6 π electron aromatic rings, M 10 π electron aromatic rings, and N 14 π electron aromatic rings, wherein L, M, and N are each an integer of 0 (zero) to 4 and L + M + N = 1 to 4; and a terminal structure attached to both ends of said skeleton structure, said terminal structure being capable of developing liquid crystallinity, said process comprising:

repeatedly purifying the organic semiconductor material to remove impurities such that the phase angle θ of impedance of said organic semiconductor material is $-80° \leq \theta \leq -90°$ as determined in the measurement of impedance in a frequency f range of 100 Hz $\leq f \leq$ 1 MHz ~~in such a state that~~ when said organic semiconductor material in an isotropic phase state is held between a pair of opposed substrates with an interelectrode spacing of 9 μm.

2. (currently amended) An organic semiconductor element comprising a functional layer comprising an organic semiconductor material ~~produced by the process according to claim 1~~, wherein

the organic semiconductor material, having rod-like low-molecular liquid crystallinity, comprises a skeleton structure comprising: L 6 π electron aromatic rings, M 10 π electron aromatic rings, and N 14 π electron aromatic rings, wherein L, M, and N are each an integer of 0 (zero) to 4 and L + M + N = 1 to 4; and a terminal structure attached to both ends of said skeleton structure, said terminal structure being capable of developing liquid crystallinity.

the phase angle θ of impedance of said organic semiconductor material is $-80° \leq \theta \leq -90°$ as determined in the measurement of impedance in a frequency f range of 100 Hz $\leq$ f $\leq$ 1 MHz when said organic semiconductor material in an isotropic phase state is held between a pair of opposed substrates with an interelectrode spacing of 9 μm, and

the functional layer has been formed by heating said organic semiconductor material to a temperature high enough for the organic semiconductor material to exhibit at least a smectic phase and then cooling the organic semiconductor material, and

at least a part of the organic semiconductor material is in a crystal phase.

3. (currently amended) [[An]] The organic semiconductor element ~~comprising a functional layer comprising an organic semiconductor material produced by the process~~ according to claim [[1]] 2, wherein

the organic semiconductor material exhibits a smectic phase.